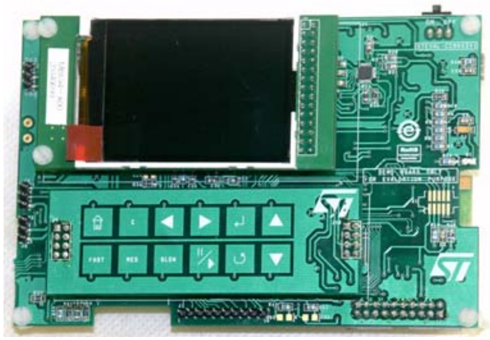
STEVAL-CCM003V1

Graphic panel with ZigBee® features based on the STM32 and SPZBE260 module

Data brief

Features

- Microsoft FAT16/FAT32 compatible library
- JPEG decoder algorithm
- S-Touch™-based touch keys for menu navigation
- MEMS-controlled image orientation based on frame alignment
- User programmable time interval for pictures
- ZigBee® module for user applications
- Date, time and temperature display
- USB mass-storage connectivity for picture transfer
- Rechargeable battery powered
- On-board JTAG connector for firmware upgrade
- RoHS compliant



STEVAL-CCM003V1

Description

The complete system is designed as two separate hardware units.

The STEVAL-CCM003V2 described in this document, also called “monitoring unit”, consists of a TFT and ZigBee® module interfaced with the STM32 for viewing / monitoring JPEG images.

The second unit, called the “camera unit” is the STEVAL-IFV001V1 and consists of a camera with a ZigBee® module interfaced with the STM32 microcontroller. The STM32 microcontroller in the camera unit captures JPEG images from the camera (using DMA) and transfers them to the ZigBee® network using the SPI-controlled SN260 module.

The images are transferred in JPEG format, which helps to reduce transfer time on the ZigBee® network. The camera unit can also record these images in the on-board memory (microSD card) using the FAT file system. The user can record these images at the click of a button, or the system can be expanded to record the images when motion is detected by the camera (using the PIR sensor).

The monitoring unit scans for JPEG images on the ZigBee® network. Once the images are available on the network, it captures the images. These JPEG images are then converted into BMP format for display on the on-board TFT. Both units can be powered either from a battery or through USB. The system can be configured to enter standby mode as per the user configuration. This feature helps reduce system power consumption. These features render the system suitable for applications where certain areas require wireless monitoring, such as door phones or baby monitoring systems.

For further information contact your local STMicroelectronics sales office. www.st.com

1 Schematic diagrams

Figure 1. Microcontroller circuit schematic

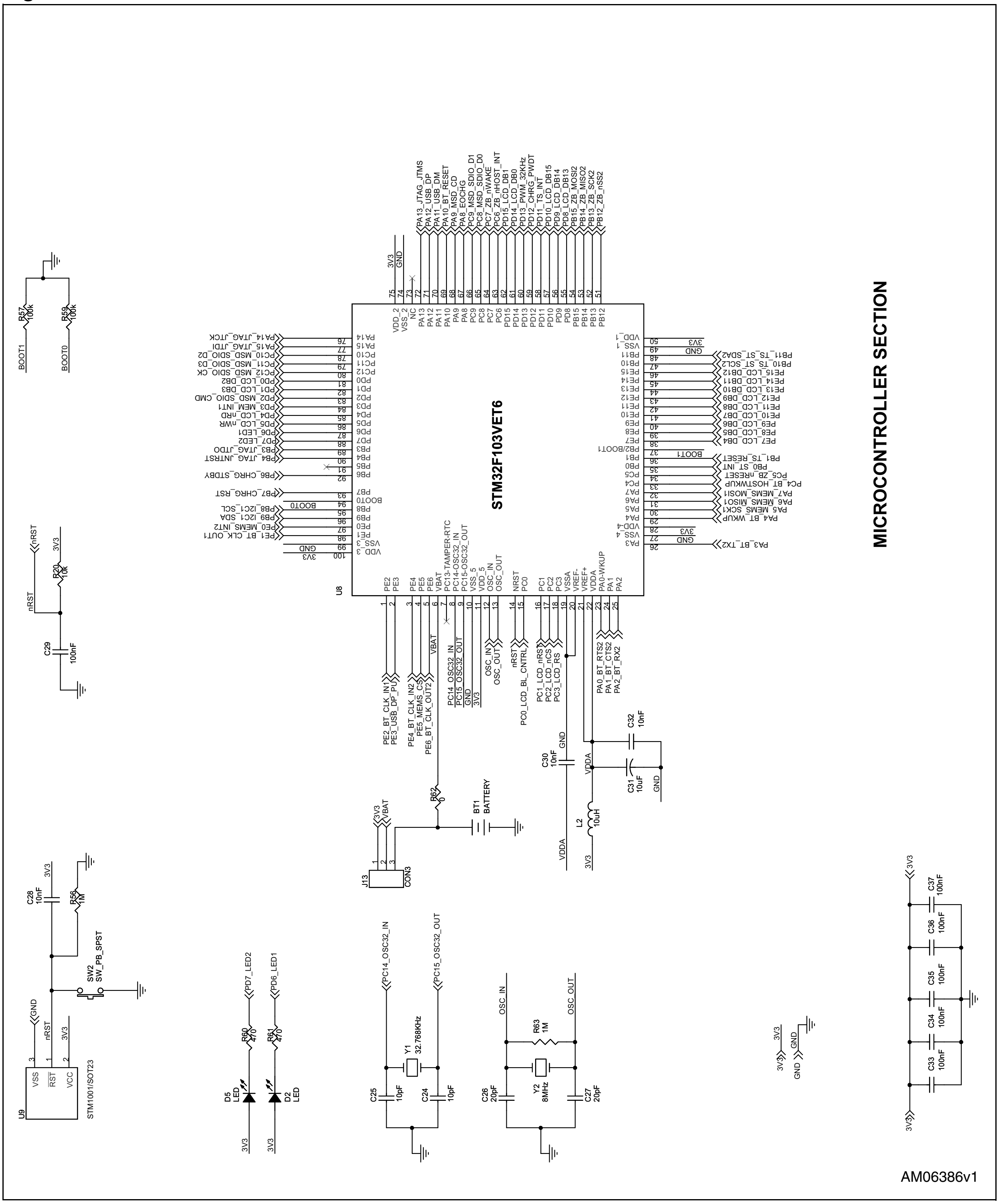


Figure 2. Connector circuit schematics

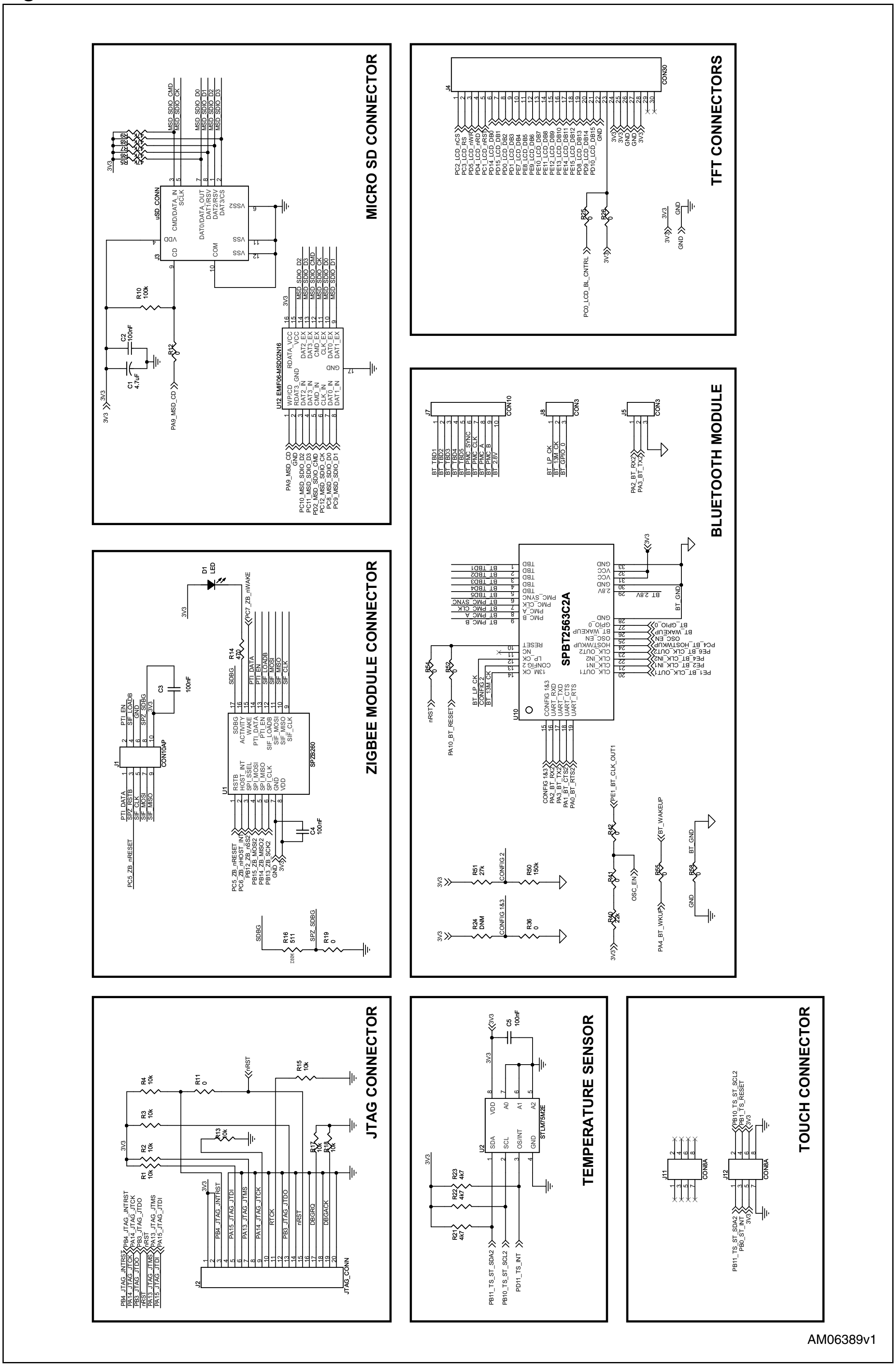


Figure 3. Power, MEMS and USB section schematics

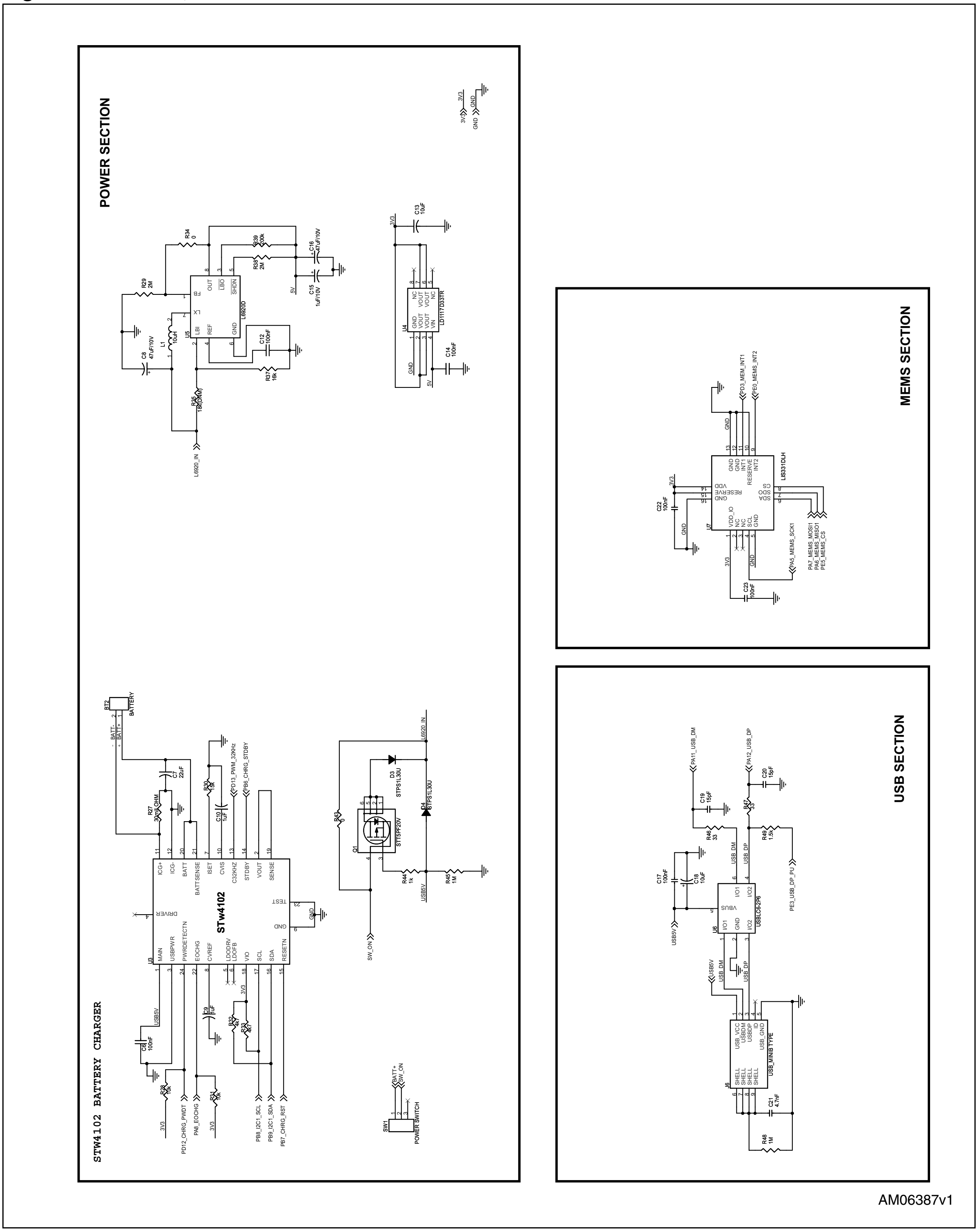
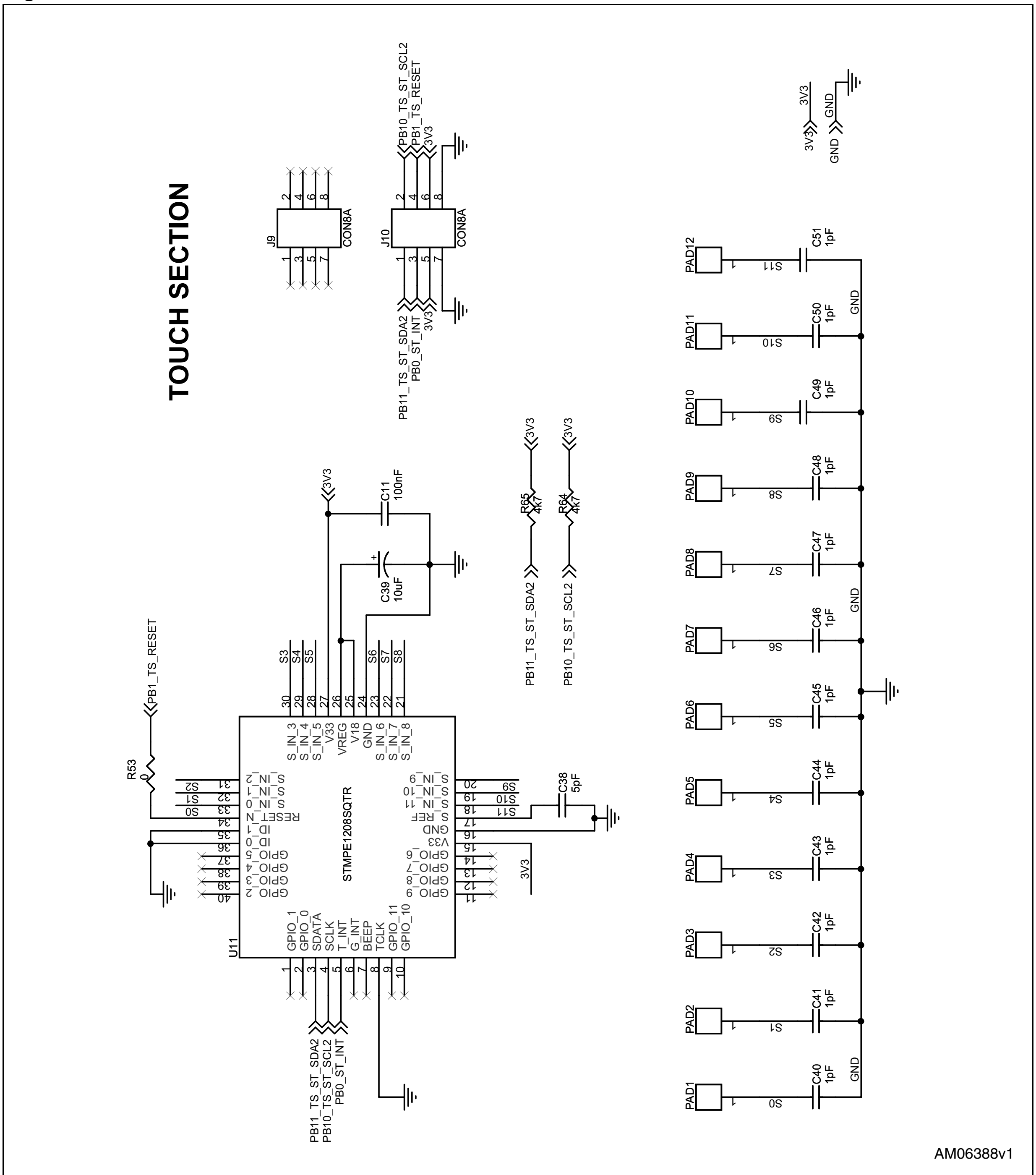


Figure 4. Touch section schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
09-Mar-2010	1	Initial release.

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